

CLAIMS

What is claimed is:

1. An optical disc, comprising:

track grooves formed in a radial direction of the disc, with the disc being divided into a plurality of zones, wherein the track grooves are formatted into a waved pattern in the radial direction of the disc, overlapped over recorded user data, to record zone address information for each of the divided zones based on a predetermined modulation rule, wherein each zone has a recording capacity in which an arbitrary recording capacity is added to a data recording capacity needed for each divided zone.

2. The optical disc of claim 1, wherein an arbitrary area at an inner and/or outer circumferences in each zone has a coupling area separate from a user data recording area.

3. The optical disc of claim 2, wherein the coupling area has a predetermined pattern.

4. The optical disc of claim 2, wherein, during recording of the user data, in each zone an arbitrary zone start pattern and/or zone end pattern is additionally recorded.

5. The optical disc of claim 1, wherein, during recording of the user data, in each zone an arbitrary zone start pattern and/or zone end pattern is additionally recorded.

6. The optical disc of claim 1, wherein, when data is recorded or reproduced at both sides of a land portion and a groove portion formed by one of the track grooves, a sequence in recording or reproduction of data in each zone is performed according to a following sequence: after recording or reproduction at a groove portion in each zone is completed, recording or reproduction at the land portion is performed.

7. The optical disc of claim 1, wherein, when data is recorded or reproduced at both sides of a land portion and a groove portion formed by one of the track grooves, a sequence in recording or reproduction of data in each zone is performed according to a following sequence: after recording or reproduction at a land portion in each zone is completed, recording or

reproduction at the groove portion is performed.

8. The optical disc of claim 1, wherein the optical disc is a DVD-RAM disc.
9. The optical disc of claim 1, wherein each zone has a plurality of sectors.
10. The optical disc of claim 9, wherein each of the plurality of sectors has a sector address portion to store a corresponding sector address.
11. An optical disc, comprising:
a plurality of tracks formed in a spiral direction of the optical disc, each track having at least a groove portion; and
a plurality of zones, each zone including a predetermined number of the plurality of tracks,
wherein the optical disc is formatted to include zone addresses for each zone by formatting a portion of the corresponding zone track grooves, in each zone, to include a wobble pattern based on a predetermined modulation rule.
12. The optical disc of claim 11, wherein each track further includes a land portion.
13. The optical disc of claim 12, wherein land and groove recording and reproduction is possible, respectively, to and from more than one spiral of the optical disc.
14. The optical disc of claim 11, wherein the optical disc is a DVD-RAM.
15. The optical disc of claim 11, wherein each zone further includes a coupling area, separate from a user data recording area of a corresponding zone, with the coupling area at an inner and/or outer circumference of the corresponding zone.
16. The optical disc of claim 15, wherein a predetermined pattern is recorded in the coupling area, with the pattern being based on a recording or reproduction system to perform recording or reproduction, respectively, to or from the optical disc.

17. The optical disc of claim 11, wherein, during recording of user data, in each zone an arbitrary zone start pattern and/or zone end pattern is additionally recorded.

18. The optical disc of claim 11, wherein the predetermined modulation rule is one of an FM modulation, an AM modulation, and a PM modulation.

19. The optical disc of claim 11, wherein the predetermined number of the plurality of tracks for each zone is based upon the data recording capacity needed for each zone plus an arbitrary recording capacity.

20. The optical disc of claim 19, wherein the arbitrary recording capacity is a coupling area.

21. The optical disc of claim 11, wherein each zone has a plurality of sectors.

22. The optical disc of claim 21, wherein each of the plurality of sectors has a sector address portion to store a corresponding sector address.

23. A method of recording data on an optical disc, comprising:
dividing the optical disc into a plurality of zones;
formatting a zone address portion of one of the zones to include a wobble pattern based on a predetermined modulation rule and corresponding to an address of the zone; and
recording user data in a user data portion of the zone.

24. The method of claim 19, further comprising recording a predetermined pattern in an additional coupling portion of the zone, after the recording of user data.

25. The method of claim 19, wherein the recording of user data includes recording of a zone start position, then recording of the user data, then a recording of a zone end position.